GRUMMAN plane news

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Pre-flight check. *Dr. Robert Delvecchio shows Stephanie Meyer how to operate the control stick. A force measuring device built into the equipment will make sure no one underestimates the power of a woman.*

VTX breaks sex barrier

Grumman engineer Nancy Guernsey is a licensed private pilot. . .a 5'3" licensed private pilot.

"When I fly, I have to sit on a telephone book and a cushion," she says. "And arm reach can be a real problem. You can get into tight situations in an airplane, and easy access to all your controls is necessary for good emergency handling."

And if Guernsey has problems with her single-engine Piper Warrior, she would certainly have trouble reaching the pedals and controls on an F-14 Tomcat, or other Navy aircraft, designed for men who are 5'6" to 6'1".

But the next generation of military aircraft will be different, and the VTXTS, the proposed Navy jet pilot training system for the 1990s and beyond, is part of a changing philosophy. Grumman and Beech Aircraft teamed together last February for an initial concept design study; the design they submit—and the designs of other competitors for the Navy contract—must accommodate female as well as male pilots and maintenance personnel.

"This is the first time the Navy has required us to design for both men and women," says Dr. Robert Delvecchio of the Life Sciences group in Plant 14, who is heading up a VTXTS study on female body dimensions. One hundred and fifty Grumman women are participating in the project, and they're proving what the Life Sciences group had already predicted: when it comes to airplanes, one size won't fit all.

"Most aircraft are designed to suit the five-to-95 percentile male," says Delvecchio. "That's a group that ranges in height from 5'6" to 6'1", with a mean height of 5'10". *(Continued on page 5)*

Update on FIxible bus

- pg. 2

Milledgeville welcomes E-2C

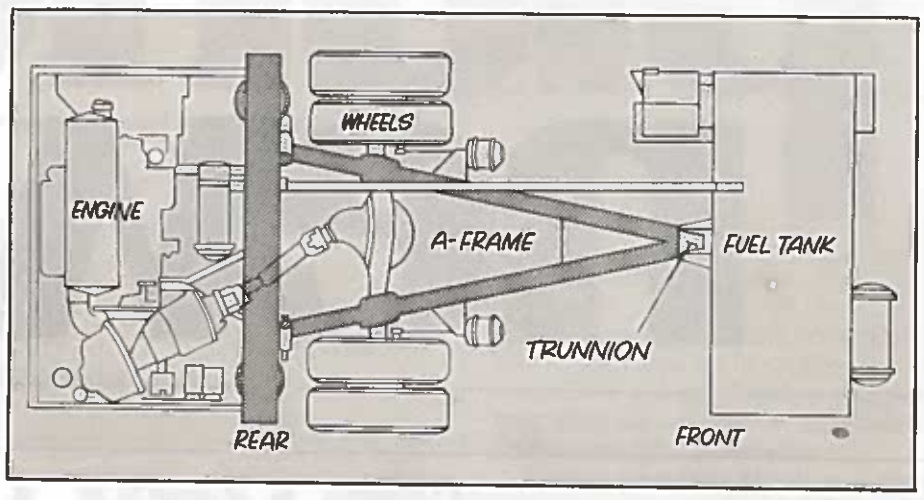
-pg. 3

Cracked frames stop buses; reinforcement plan underway

All things considered, it hasn't been a great winter for the new Grumman Flxible bus.

But Grumman Corporation Chairman Jack Bierwirth thinks that may be turning around soon. "It's going to knock us off our stride for four to six months," says Bierwirth. "There's no doubt about that. But I believe we are going to be a better company for the experience."

The Flxible Company was purchased by Grumman from Rohr Industries in 1978; 1980 was to have been the first year it turned a profit. Its advance design bus, the Model 870, had been purchased by 41 transit authorities. By early November, 2,600 buses had been delivered, and another 1,500 were on order.



Cracked A-frame

Then on November 16, a crack was discovered in the A-frame — a part of the undercarriage — of one New York City bus; another was found in a second bus the next day. Grumman and transit authority people immediately began to inspect the entire fleet. All other customers were alerted to the problem, and field service representatives helped them inspect their buses.

On December 13, New York City and Los Angeles removed their entire fleets from service because additional cracks had been found. Chicago followed suit on December 26.

A related problem surfaced on January 24. Inspection of a disabled bus in Hartford, Connecticut, showed that metal fatigue had caused cracks in the trunnion, a metal piece that connects the A-frame to the fuel tank. The corporation immediately notified all transit authorities, telling them that if the trunnion should break, it may make the bus difficult to control — a potential safety problem. Grumman suggested that the buses be carefully inspected, and that if a crack in the trunnion is found, that bus should be taken out of service.

The trunnion and other damaged portions of the undercarriage will be fixed in a reinforcement program already well underway. From the beginning, Grumman told all customers that it accepted full responsibility under the warranty to make the necessary repairs at its own expense.

Says Grumman Flxible President Bob Landon, "We have worked out a reinforcement which calls for some 200 pounds of steel to be applied to the A-frame, making it at least 10 times stronger."

Grumman Aerospace structural engineering and stress analysis specialists were called in to help with the design of the reinforcement, and the metalurgical analyses were conducted at the Aerospace laboratories.

Reopen Plant 36

The New York City buses are being reinforced at the newly reopened Plant 36 in Garden City. When the program is operating at capacity, repairs will be completed on eight to 10 buses a day. Other rework centers have been established in Tulare, California; Houston, Texas; Chicago, Illinois; and Montgomery, Pennsylvania.

After the reinforcements are completed, Grumman will extend its warranty on the A-frame and other strengthened parts. The warranty had been for three years or 150,000 miles; it is increased to six years or 300,000 miles.

"This offer reflects our confidence in the rework program," says Bierwirth.

"In fact, when the worlds collide and everything is reduced to ashes, I think the only things left standing will be a few thousand Grumman A-frames."

Bierwirth feels the underpinnings of the corporation will be similarly reinforced by the crisis.

"This experience has taught us some painful lessons," says Bierwirth. "But I think it will strengthen us in a way that wouldn't have been possible if we had nothing but smooth sailing."

Is Grumman's reputation tarnished?

"I don't believe so," Bierwirth says. "A good measure of a person — or a corporation — is reaction to adversity. We are standing by our products. After this is all over, we will have proved ourselves a company that accepted the full burden of its responsibilities. And in spite of these difficulties, the Model 870 bus remains a truly exceptional product — one that is responsive to environmental concerns. It will serve our cities well."

But why did the problems occur? Television commentators, newspaper editors, and every Grummanite's next-door neighbor all wanted to know why the company that helped land a man on the moon was building buses that cracked. (*Fortune* magazine said the Flxible bus was "Brttle, actually.")

"From the information now available, we believe that the cracks were caused by unanticipated stresses causing metal fatigue," says Landon, "stresses higher than those recorded during extensive testing in New York and at the Ohio Transportation Research Center."

Fatigue testing was begun under Rohr as early as 1974 when a fully instrumented A-frame was tested on a shaker; later that year, an entire bus was subjected to a 200-hour accelerated fatigue test program. In 1977 and 1978, tests were run, calculated to represent 500,000 miles of operating service. No major problems were found.

And in 1979, before New York City took delivery on its first bus, the design was tested again. Under the supervision of the transit authority's own consultant, a production bus was instrumented, loaded, and driven over a test track in Ohio; then it was brought back and tested again on some of the worst streets in the city. The consultant and transit authority engineers recommended strengthening the vertical supports between the windows. These supports were reinforced and are not part of the problems that developed.

"We had every reason to believe that the Model 870 bus had been fully, adequately tested," says Landon.

"Unfortunately, the tests weren't as tough as the real world of bus operations."

Has the mistake been an expensive one?

"Yes, but not disastrously so," says Bierwirth. "We had expected a fourth quarter profit from Flxible in 1980. But because of the problems we've had, we've set up a reserve for the fourth quarter to cover the expenses of reinforcing the buses. The cost of that reserve will make the fourth quarter unprofitable.

"We're looking to turn the corner on that in 1981," says Bierwirth. "We're all expecting a better year."

Ready to roll. *Grumman re-opened its Plant 36 facility in Garden City to perform reinforcement work on New York City's Flxible buses.*

Hawkeye tips its wings over Milledgeville

It has been five years since Grumman moved to Milledgeville, Georgia, to set up a plant to manufacture aircraft components. And most of the Georgians who joined the company there had never seen a Grumman plane—until recently, when two E-2C Hawkeyes flew over the facility.

Welcome visitors

The low-level fly-by occurred on January 8 when two E-2C Hawkeyes from VAW-125, enroute from Norfolk, Virginia, to a carrier off the Florida coast, paid a visit to Milledgeville.

Vice President Bill Zarkowsky, who was the first E-2C program director and now is general manager of Milledgeville Operations, initiated the visit to Georgia. He told Jim Philbin, who heads the E-2C program, how much it would mean to Grummanites at Milledgeville to be able to see one of the planes. "Two weeks later," says Zarkowsky, "they arranged a low-level fly-over for us."

"The fly-over," Philbin points out, "was a perfect opportunity to show the Grumman team in Georgia what they contributed to this really outstanding aircraft." Milledgeville produces more than 1,000 parts for the E-2C.

On January 8, everybody left Plant 66 for the parking lot. Children from a local grammar school and other city residents were outside the gate, waiting to see their visitors.

The Hawkeyes came in low, out of the sun.

"The planes looked beautiful as they flew by," says Jimmy Swint.

Jackie Morris agrees. "This was something Milledgeville Grummanites have been asking for, for a long time. It was a very exciting demonstration."

The planes made three low-level passes over the parking lot, to the cheers and applause of their audience, and the Grummanites listened to conversations among Zarkowsky, Philbin and the pilots over a radio hooked up to a public address system.

"I thought it was great," says Dot Bell. "I was so impressed that I brought home a picture of the plane to show my husband."

Day of events

While at Milledgeville, Philbin and other E-2C program members provided a look at projected aircraft schedules, fleet operations and future development objectives.

But the fly-over stood out among the day's events. Says Betty Beck, "I help make some of the test parts for the E-2C. It was a beautiful sight."

Project Sterling opens its doors to retirees

So you retired from Grumman Aerospace. That doesn't mean that you still don't think about the old shop, the office. You've still got a couple of good ideas stashed away in the back of your mind about how they could improve things.

Project Sterling thinks so, too. "We received approval from the Corporate Awards Committee to allow retirees of the Grumman Aerospace Corporation to submit Project Sterling suggestions," says John Alvar, manager of Motivational Programs.

Suggestions from retirees will be handled and judged as those from current employees are. All GAC retirees, even those still working in Grumman as job shoppers, are eligible.

All rules are on the back of the Project Sterling form, available from the Motivational Programs office or through the Retiree Club. All awards to retirees will be processed through the Club.

Whom to contact

For more information or to obtain a form contact your local chapter of the Retiree Club, or the Motivational Programs office, Plant 28A, 900 South Oyster Bay Road, Bethpage, N.Y. 11714. Their phone number is (516) 575-4332.

Insurance note

Parents are reminded that dependent health insurance for children who reach age 19 before the end of January 1981 will expire February 1, 1981 unless they are full-time students. Coverage for full-time students expires the February 1 following their 24th birthday. Transfer to one of several plans of individual health insurance is available on a direct-payment basis. The Insurance Department in Plant 28 has rate information and applications.

Parents who have children who reach age 19 before January 1, 1981 and who are incapable of self-support because of mental or physical handicaps may call Ext. 3314 for information on continued health coverage under the Grumman group insurance plan.

ATE family moves into new Pl.31 home

When a family gets too big for its home, it thinks about building an extension or moving to a larger one.

The Automatic Test Equipment (ATE) program did both. They've moved from their scattered locations in Plant 5 to consolidated office and laboratory space in a newly enlarged Plant 31.

Says program manager Ed Stroud, "The new facility can accommodate our expanding ATE business — and having all our people in one place will increase our efficiency." ATE is part of the Integrated Logistics Support department.

New quarters offer 10,000 square feet of laboratory space in the original high-bay area, plus 7,200 square feet for lab space in the extension. Another 20,000 square feet will go for office space for ATE's systems management, marketing, and engineering people.

Grumman's work with automatic test equipment began in the late 1950's with a system to test the complex avionics in the A-6A and E-2A aircraft. Since then, ATE has become a necessity for testing all electronics, and is used to support all five Grumman aircraft — the A-6E, E-2C, EA-6B, F-14, and EF-111.

In addition, there are now 10 types of ATE systems being developed or produced under contracts independent of Grumman's prime aircraft programs.

The Grumman CATs (Computerized Automatic Testers, a name chosen to trade in on the company's tradition of "cat" aircraft) are used to check out radar communications, electronic warfare equipment, and even shipboard electronics. There is also a growing commercial market for the CATs, according to Stroud, with General Electric and the Raytheon Company among new customers.

Blood program is no pintsize effort

Blood donations from Long Island Grummanites have increased two-and-a-half times under a revitalized blood program begun six months ago.

"We're very pleased with the results of the drive so far, though we still have a lot of ground to make up," says Jack Bierwirth, Grumman Corporation chairman of the board and this year's Long Island chairman of the Greater New York Blood Program. "Long Islanders are beginning to understand how desperately their own community needs blood," he says.

Dave Walsh, chairman of Grumman's blood program, says, "Under the new scheduling system, Grumman's Long Island donations from August through December of last year have totalled 2,464 pints of blood. That's more in six months than in all of 1979."

The new system was started last spring, when solicitation cards were sent to all 18,000 Grummanites on Long Island. About 9,000 people signed up.

"Our first priority was to set up a permanent blood donor organization to accommodate all those who said they would donate," Walsh says. "We set up a computer program to schedule each donor and we planned collection sites in as many plants as we possibly could to make it more convenient for the donors."

Since August, Grumman's donor rate has jumped to 28 percent — up from about 12 percent in recent years. Besides the system of scheduled donations, Walsh credits two groups of people with making the system work. "The blood captains and the Grumman volunteer workers have been two of the most effective components of the new campaign."

The blood captains provide the necessary personal contact when donors have scheduling problems or questions. According to Walsh, their feedback has helped streamline and improve the program. The volunteers handle much of the administrative work.

Daily crisis

The shortfall in the blood supply in the metropolitan area is serious. Long Island Blood Services (LIBS), which processes and distributes all blood donations on Long Island, reports that the 43 hospitals they serve use an average of 500 to 550 pints of blood each day. Daily donations are only about 300 to 350 pints. The difference is made up for by purchasing blood from Europe.

The desire to give is there. During the January collection at Grumman, Walsh issued an appeal over the loudspeakers for additional, unscheduled donations after he received an urgent call for blood from LIBS. Because of that call, Walsh reports, 150 more Grummanites showed up at Plant 30 that afternoon to roll up their sleeves.

"Grummanites always respond in a crisis," Walsh says, "and more and more are starting to realize that the problem is an ongoing one." It also has many facets.

The technical side of the problem is that whole blood can be stored for only 21 days; some of the components, such as white blood cells, have a storage life of only a few days. The donation process must be a continuous one.

'It was easy!' *These Grummanites at Calverton didn't mind giving a pint of blood for their Long Island neighbors. But, even though more people across the Island are donating, there is still a serious shortfall in blood supplies.*

There is also the problem of importing blood from Europe. In 1979, fully 38 percent of Long Island's blood needs were supplied by Belgium, Switzerland, and West Germany. And LIBS reports that no European blood will be available to us during the two week period from January 26 to February 10 of this year.

Then, there is the human side. "Missed appointments, schedule conflicts, nervousness, all contribute to our 'no-show' rate," Walsh explains. Almost 40 percent of the people scheduled do not keep their appointments. "We are making a special appeal to all scheduled donors to keep their appointments, or arrange with their captains for a new time."

"The old philosophy about 'blood banks' with 'deposits' and 'credits' is out of date," says Walsh. "The current policy is that every healthy, eligible person has a responsibility to the community to donate blood . . . and that everyone, whether or not they've ever given blood, has a right to receive it if they need it."

How do we rate?

How do the results in the first six months of Grumman's revitalized blood program compare to other Long Island companies' blood donation rates?

Compare Grumman's 28 percent rate with these other L.I. firms:

Newsday — 10%
AIL — 18%
Fairchild Republic — 22.5%
LILCO — 23%
GIECO — 25%
Sperry — 31%

You've got a date

The following is the blood donation schedule for Long Island installations for the rest of 1981:

February 9, 10: Plant 43 (Great River)
March 2: Bethpage (night shift)*
March 16: Plant 242 (Woodbury)
March 16: Plant 15
April 6, 14, 20, 21: Plant 1
May 15, 18: Plant 35
June 15, 19: Plant 5
July 1, 2, 6: Plant 5
August 3, 4: Plant 30*
September 1, 2: Plant 6 (Calverton)*
September 3: Plant 6 (night shift)*
October 29, 30: Plant 28A*
November 9, 10: Plant 40 (Melville)*
December 14, 15: Plant 35*

*—Tentative dates

obituaries

JORDAN T. NEARY of Plant Protection, Pl. 18, died Dec. 25 at the age of 64. He had been with the company since 1967 and resided at 80-34 West Jericho Tpke, Syosset.

EDWARD J. MURRAY of Employee Services, Pl. 2, died Dec. 31 at the age of 53. He had been with the company since 1948 and resided at 555 Ingraham Lane, New Hyde Park.

JOHN O'HANLEY JR., of Mfg. Resources, Pl. 9, died Jan. 2 at the age of 38. He had been with the company since 1966 and resided at 111 Kellum St., West Babylon.

STANLEY J. CHOINSKI of Steel Parts Assembly, Pl. 2, died Jan. 10 at the age of 59. He had been with the company since 1949 and resided at 18 Reading Lane, Bethpage.

FRANK GIL of ILS Tech. Illustrations, Pl. 15, died Jan. 10 at the age of 54. He had been with the company since 1961 and resided at 704 Drew Dr., St. James.

JOHN DaPONTE of Maint-Facil Equip & Gen., Pl. 5, died Jan. 12 at the age of 61. He had been with the company since 1959 and resided at 20 Coronet Crescent, Bethpage.

THOMAS G. WOODS JR., of ILS Reqt. Def., Pl. 40, died Jan. 12 at the age of 62. He had been with the company since 1962 and resided at 8 Redwood Dr., Huntington.

letters

Dear editor,

No. 90 in the "First Hundred Grummanites" list should have read "Ketcham." No one at all will remember him as anything but Buck Ketcham — Mister Plant 1 — although he was David Hallock Ketcham on the records.

I remember even older times — about 1912 — when Roy Grumman and Buck Ketcham took Huntington High School's basketball team to great victories.

Hope Zarensky

Personals

I wish to express my heart-felt thanks to my co-workers for their expression of kindness, generosity and sympathy following the passing of my father. Fred J. DeLucia

We wish to extend our sincere thanks to all our friends and co-workers for their sympathy and kindness during the recent loss of my wife. Nicholas Dukarm and Family

To all friends and associates: your overwhelming outpouring of sympathy, thoughtfulness and kindness for our recent loss is sincerely appreciated and will always be remembered. Franklin and Christopher Bonitto

Thank you for your thoughtful kindness at a time when it was greatly appreciated. Loretta, Diana and Valerie Bero

Women measure up to VTX study

(Continued from page 1)

"Now, the five-to-95 percentile females range from just under 5'1" to 5'8½" — with a mean height of 5'4¾". Women who are 5'6" and over should have little or no problem; but the ones who are smaller than that would have some real difficulties."

The study measures all the factors that would influence how the cockpit should be configured: height, weight, sitting height, leg length, arm reach, and muscle strength.

"Most of the difference is in leg length," explains Delvecchio. "If you look at the people around you, you'll notice that, sitting down, most of them are very close in height. A 6'2" man doesn't sit that much taller than a 5'2" woman; their torsos are very nearly the same length."

Suiting up

In the first part of the test, only physical dimensions are measured. Women who are within a specified range are called back for the second phase, which uses the "reconfigurable crew station evaluator." The evaluator is a piece of equipment that can simulate the cockpit set-up of various aircraft.

For this portion of the test, volunteers are asked to put on a flight suit and helmet and sit in the cockpit. "The flight suit is fairly heavy, and the person wearing it sits about a half inch higher because of the thickness of the material," Delvecchio says. "And the helmet reduces the amount of available headroom."

Good response

The volunteers are then asked to push and pull on the control stick, and press down on the rudder pedals. A scale built into the evaluator indicates leg and arm strength.

The first phase was completed by the second week in January; the second phase is still going on and will be finished up by early February.

The women who participated in the study had answered a request for volunteers that appeared in the November 14 issue of *Plane News*. Delvecchio notes that they were pleased with the large response. "The more volunteers, the more valid our results," he explains. "We had been hoping to get at least 70 participants, and we got more than twice that number."

"It's a facinating project," says Jill Breunig, a buyer in Procurement, Pl. 40. "I like being part of something completely new. . .especially when you consider that it could help women years from now."

Stephanie Meyer, a receptionist at headquarters, says she signed up ". . .because I always raise my hand when someone is looking for volunteers. And this project is important for the company, and important for women."

Carole Ann Bosco, a financial analyst in Plant 30, agrees.

"It's really encouraging to see that women are being taken into consideration more now. So many things are simply designed for bigger people." At 5'2¾", Bosco knows just how frustrating that can be.

"Chairs, for instance," she says. "My feet don't hit the floor. I finally traded in the chair I've been sitting on at work for three years now. It was supposed to be adjustable, but it had arms which wouldn't allow it to fit under the desk. I had to sit forward on it, my spine never touching the back of the chair. The new one I have now is a plain, non-adjustable, straight-back chair. Not great, but at least my feet are on the floor.

"Driving can be a problem, too. I drive a small car, but in a rental car I have to put a cushion in back of me in order to reach the pedals," Bosco says.

But Nancy Guernsey, the volunteer with the private pilot's license tucked away in her wallet, feels a special satisfaction from participating in the project.

"If I want to fly, I have no choice but to contend with airplanes designed for tall people," says Guernsey. "That's why I'm especially pleased to be part of this study. In a way, it's my chance to get even!"

Heads up. *Mechanical engineer Mike Pepe checks Stephanie Meyer's sitting height. One hundred and fifty Grumman women volunteered for the study, which will be completed in early February.*

Need a ride?

COMMACK: to Calverton Plt 06, 07, 08, 7 am-3:30 pm shift. M. Romaglino, X6909, X6577

HOLTSVILLE: to Calverton, 7am-3:30 pm shift. E. Long, X6748

ISLIP TERRACE: to Plt 2, start or join existing car pool, 7-3:30 shift. D. McNiff, X3180

LAKE GROVE/CENTEREACH AREA: to Plt 40, 7:48-4:18. K. Riley, X6188

SMITHTOWN/HAUPPAUGE/NESCONSET: Form or join car pool, 7:48 am, flexible. J. Hickey, X7752

Proud record. *Over 70 Grummanites who work on the F-14 aft section at Stuart Operations in Florida gathered around their latest handiwork. This Tomcat aft section is the 400th to be shipped on schedule from Stuart to Long Island. The Stuart team has been right on target since 1973.*

service milestones

45

Joseph D. Seiler, Sub Assy. (1)

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Thomas G. Oborn, Tech. Reqts. (1)
Elvin E. Harrison Jr., Prototype (2)
Nelson J. Vosburgh, Prod. Superv. (2)
Frederick W. Buck Jr., Convent. Machs. (3)
Louis B. Wehle Jr., Eng. Sciences & Tech. (35)

35

Nicholas Genega, Electromech. Des. (25)

30

John L. Giordano, Stockrooms (2)
Charles F. Robertson, Maint-Rearrangement (2)
Frederick J. Piwowar, Maint-Facil Equip & Gen. (2)
George W. Hervey, Convent. Machs. (3)
William C. Tappe, Struct. Des. (5)
Robert W. Kress, Business Dev. M/S (5)
Albert J. Hauser, Insp-Mech. (5)
Eugene F. Hudson, Maint-Rearrangement (6)
David C. Murray, Prod. M/S (6)
William T. Cummings, Prod. Release & Anal. (6)
Claus L. Von Glahn, Electronic & Mech. ILS Supp. (6)
Anthony Podejko, Flt. Avionics (8)
Eileen Toomey, Trans Office (20)
Louis J. Salvatorelli, Struct. Anal. (25)
Joseph W. Drauch, Research (26)
William Paul, Invent Cntrl. (30)
John McNamara, Maint. Admin. (30)
Richard H. Imgram, Des. Eng. Proj. Eng. (35)
Frank C. Schwab, Elect. Final Assy. (43)
William C. Eissler, Ep Circ & Mod Fab. (43)
George A. Smith, Supp. Equip. Serv. (94)

25

Edward W. Lombardi, Prototype (1)
Thomas J. Reidy, Maint-Facil Equip & Gen. (1)
Matty Bosch, Parts Paint (1)
John Bernal, Steel Parts Assy. (2)
Joseph J. Gaffney, Wing Inner Panel & Combo (2)
James M. Edgerton, Hull Assy. (2)
Fred L. Welge, Prod. Supervision (2)
Robert Galagaran, Welding Group (2)
Peter Kleckowski, Maint-Facil Equip & Gen. (2)
Robert K. Barth, BPA Qual. Eng. Prod. Supp. (2)
John Nicastro, Spotweld (3)
Donald A. Scheulen, Prod. Superv. (3)
Elliot E. Blond, Training Syst. Prog. (4)
Alfred Zacchia, Instr. Plnng & Cntrl. (5)
Isabelle E. Ceraso, Fin Op/Secretaries (5)
William T. Ross, Est. Resources (5)
Frank J. Becker, Elect. Install. (6)
Vito Santora, Paint (6)
Carl F. Cooke, Prod. Deputy & Statn Foreman (6)
Adolph R. Koltzow, Matl. Handl/Stor. (6)
Leonard L. Smith, Proj. Eng-Vehicle (6)
Harold R. Tilley, Structures (7)
Francis J. Zahra, Flt. Dev. Ops. (7)
David G. Call, Prod. M/S (7)
Michael A. Marcari, Producibility Eng. (9)
William V. DeLongis, Subcontr. Surveil. (30)
Jarvis Leng, Fluid Dynamics (35)
Joseph A. Jeransky, Q.C. Insp. Mgmt. (35)
Albert E. Ure, Prog. Contracts (35)
Ronald W. Betts, Resources M/S (39)
Stanley S. Ramsden, ILS Prog. Mgt. (40)
Raymond J. Warenik, ILS Supply Ops Proj. Mgt. (40)
Victor C. Ehmig, Config. Data Mgmt. (40)
Howard J. Jepson, Prod. Rel & Anal. (43)
Edward Stepnoski, Site Mgt. (57)
Robert Diamond Jr., Prod. Cntl-Parts Cntrl. (88)
Stanley J. Zolek, Maint-Facil Equip & Gen. (111)
Joan Hermges, Repro Servs. (111)
Mary Flacksenburg, Secretary and Personnel (111)
Richard H. Harrison, Invent. Control (4)
James B. Scanlon, ILS Prog. Mgt. (1)
Edward T. Barron, Cust. Reqts. (9)
David B. Seeman, Flt. Crews (4)
Kenneth R. Crow, F-14 Final Assy. (77)
Anthony J. Parrella, Mech. Struct & Assy-Temp. (43)
Leonard L. Auchenbaugh, Flt. Ops. (4)
Donald H. Frey, Engineering (88)
Bruce C. Gray, Production (88)
Max E. Hendrickson, Quality Control (88)
Frank J. Palermo, Flt. Test (88)

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John Piccione, ILS Equip. Tech. Mgt. (1)
Irving R. Monthie, ILS Elect. Eng. (1)
Michael Liccese, ILS Auto. Test Equip. Eng. (1)
Howard J. Whidden, Controls (2)
Paul Dent, Welding Group (2)
Arthur H. Hoffmann, Det. Pts. Plnng. (2)
Anthony J. Simone, Insp-Mech. (3)
Michael Shawiak Jr., Environ. Ctrl & Test (5)
Robert H. Penner, Power Pl. Des. (5)
Ross Fleisig, Sys. Eng. Proj. Eng. (5)
Edward S. Matthews Jr., Govt Matl. Cntrl. (6)
Donald C. Voigt, Radar (7)
Charles S. Osborne, RF Equip. Prod. Supp. (7)
Arthur C. Flanigan, Elect. Sys. Prod. (7)
Ralph Viskewich, Flt. Avionics (8)
Irving Barnowsky, Meas. Stds. (12)
Gerald Levine, Aero Test (13)
Robert H. Franke, ILS Publ. Mgmt. (15)
Anthony Pecora, ILS Tech. Writ. (15)
William E. Haynes, ILS Tech. Illus. (15)
Robert P. Schroeder, Commun. NAV. & I.F.F. (25)
Ronald K. Bies, Radar (25)
William R. Weaver, Prog. Contracts (25)
Robert M. Benning, Prog. Contracts (25)
Virginia A. Petruchik, Personnel Admin. (28)
Gertrude T. Collins, ILS Tech. Servs. (35)
William F. Nelson, Instruct/Anal (39)
John P. Kirwan, ILS Resource Appl. (40)
Anthony M. Ventura, Plant Protection (40)
Ray G. Decker, Tech. Ops. (77)
Richard Sperling, Supp. Equip. Serv. (79)
Joseph Campisi, Support (88)

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Leonard G. Bonadonna, DC-8 Cammacorp (1)
Paul E. Miller Jr., Hydraulics (1)
Richard F. Griffin Jr., Elect. Fab. (1)
William E. Dunstane, Prod. Cntl-Parts Control (1)
Robert T. Elsdon, ILS Mech. Eng/Des. (1)
Raymond W. Gaddis, ILS Elect. Pack. (1)
Edward J. Smith Jr., ILS Resource Cntrl. (1)
George F. Gilmartin, ILS Systems Tech. Mgt. (1)
Robert E. Svec, ILS Syst. Des. Eng. (1)
James P. Strohecker, ILS Syst. Des. Eng. (1)
Gertrude Kayser, Tech. Reqts. (1)
Richard W. Yoniak, Drop Hammer (2)
Daniel D. Burley, Alodine (2)
Christian P. Schnepf, Alodine (2)
Georgia Stephenson, Parts Paint (2)
Jerry Mathis, Pride Line (2)
Edmund LeViness, Sub Assy (2)
Otto Bahr Jr., Fuselage Joining (2)
Matthew Moran, Final Assy. (2)
Edward McBride Jr., Prototype (2)
Frederick J. Assey, Mfg Admin/Busin. Mgt M/S (2)

H. Tilley

F. Zahra

D. Call

M. Marcari

J. Leng

J. Jeransky

A. Ure

S. Ramsden

R. Warenik

V. Ehmig

S. Zolek

R. Harrison

J. Scanlon

E. Barron

D. Seeman

K. Crow

A. Parrella

L. Auchenbaugh

Alan G. Dreyer, Repair Cntrl. (2)
Rudolph Diel, Die Shop (2)
Peter Byrnes, Tool Cntrl. (2)
Albert H. Lowerre Jr., Maint-Rearrangement (2)
Jules C. Lisella, Maint. Indust. Cntrl. (2)
Mary C. Burgess, Distrib. Servs. (2)
Edwin Schnoor, Food Serv. (2)
Robert J. Koch, Food Serv. (2)
Dorothy E. Carroll, Assemblies (3)
Raymond F. Allen, Assemblies (3)
Eugene L. McAndrews, Honeycomb Core Details (3)
Nicholas J. Papeo, Center Section-Final (3)
Norman A. Berhannan, Mach. Ops. Busin. Office (3)
Salvatore Russo, Prod. Cntl-Parts Cntrl. (3)
Bart J. Malara, Plant Support (3)
Ernest B. Hallett, Plans & Programs (3)
Marion F. Cook, Maint-Rearrangement (3)
Resi Leonard, Distrib. Servs. (3)
Alfred A. Kleinlaut, BPA Mach. Parts Insp. (3)
Kenneth H. Bray, Airport Operations (4)
Rudolph S. Ondris, Air Traf & Radio Comm. (4)
John M. Becker, Prog. Contracts (4)
Raymond Fong, Inst. M/S (5)
Ric C. Trotta, ILS Resource Appl. (5)
Jerome W. Kappel, ILS RF/Cntrls. (5)
William Barber, ILS Auto Test Equip Eng. (5)
Thomas Soo, ILS Auto Test Equip Eng. (5)
Bruce McBurney, Office Mgmt. (5)
Richard Bahrenburg, Maint. Indust. Cntrl. (5)
Lillian DiBernardo, Food Serv. (5)
Ian R. Clarkson, Struct. Des. (5)
Anthony J. Tornabe Jr., Struct. Des. (5)
Norman Brown, Fluid Mechanics (5)
Harold W. George Jr., Ops Anal. (5)
Barry Bell, Prog. Plnng. Cntrl & Budg. (5)
Robert L. Pirrung, Resources M/S (5)
Thomas J. Gentile, Maint. Indust. Cntrl. (6)
Dominick A. Migliaccio, Fluids (6)
William Stevens, Ordnance (6)
Robert S. Farrant, Structures (6)
Jan A. Zdenek, Structures (6)
Robert R. Smith, Assy Methods & Plnng. (6)
Fritz Freiwirth, Meas. Standards (6)
Dominick Simone, Trans-Equip Maint. (7)
Mary E. Newman, Administration (7)
Richard J. Kinsella, FTT Performance & Propul (7)
Kenneth J. Rintamaki, FTT Syst. (7)
Roy Nystrom, Flt. Dev. Ops. (7)
James A. Weir, Electronic/Elect Prd. Supp. (7)
Mary L. Wakulinski, Prog. Matl. Mgmt. (9)
Vincent T. Padden, Struct. Des. (9)
Frank D'Amato, Specifications (9)
Elizabeth Jacksto, Q.C. Lab. (10)
Joseph Nix, Maint-Rearrangement (12)
Saverio DeRienzo, Maint-Rearrangement (12)
Harold V. Noonan, Chemical Eng. (12)
Charles J. Falco, Elect. Test (14)
Barbara A. Young, Distrib. Servs. (15)
Louis Amico Jr., Repro Servs. (15)
Richard A. Ward, ILS Tech. Writ. (15)
Kaj Browne, ILS Tech. Writ. (15)
Ernest Abrahamsen, ILS Tech. Writ. (15)
John Kelly, Gov't Matl. Cntrl (21)
Gladys C. Weidenfeller, Central Rec. (24)
George L. Zajac, Central Rec. (24)
James H. Abrams, Rec. Insp-Gen. (24)
Ernest R. Frank, Rec. Insp-Gen. (24)
Leroy J. Poborsky, Rec-Insp-Hydl Ful Tes. (24)
Joseph A. Mirto, Info. Rec & Serv. (25)
Stanley Martyna, Sys. Integ. (25)
Frank O'Lear, Navig & Cntrl Equip. Des (25)
Arthur Bertapelle, Advanced Space Syst. (25)
William Muecke, Prog. Contracts (25)
Michael Maurer, Prog. Contracts (25)
Donald Markarian, Prog. Mgmt-F-14A (25)
Marion Abbott, Config. Data Mgmt (25)
John Kerrigan, Proc. Ops. Info. Syst. (30)
Ann Santucci, Reqts Plnng (30)
Robert O'Hea, FAC Admin. (30)
Frank Marek, Proj. Mgmt. (30)
Lucy Gange, Food Serv. (30)
Margaret Hilbert, Financial & Reg. Reports (30)
John E. Paschier, Est. Resources (30)
Robert J. Morgenweck, Syst. Test (31)
Dennis S. Riddle, Struct. Des. Staff (35)
Jonas Joseph, B/P Warehouses (37)
George J. Lambert, Instruct/Anal. (39)
Alfred T. Mazza, Instruct/Anal. (39)
Charles E. Felsman, Illus & Prod. (39)
Richard Morhard, Illus & Prod. (39)
Patricia P. Protus, ILS Secretarial Servs. (40)
Stanley Marderstein, ILS Comp. Syst. (40)
Ralph J. Liccione Jr., ILS Prog. Cntrls. Mgt. (40)
David W. Waterman, ILS Resource Cntrl. (40)
Lawrence J. Bird, ILS RF/Controls (40)
Edward A. Hensen, Tech. Reqts. (40)
Ernest E. Roberts, Struct. Des. (40)
Victor H. Himel, Envir. Cntrl. Des. (40)
James P. Maguire, Computer Arch. (40)
Joseph T. McCarty, Specifications (40)
Harold E. Smith, Tech. Mgt. Syst. (40)
William T. Ryan, Est. Resources (40)
Robert T. Otremba, Prog. Contracts (40)

D. Frey

B. Gray

M. Hendrickson

F. Palermo

Roy T. Stebe, Mech. Det. & Fin. (43)
Alex Klimenko, Mech. Det. & Fin. (43)
William B. Stevens, Circuit Anal. (43)
Theodore H. Szajerski, Ep. Circ. & Mod. Fab. (43)
John Bernhardi, Elect. Box Pan & Draw Fab. (43)
Eddie L. Starling, Plnng & Anal. (43)
Carl J. Franz Jr., Corp. Instr. Syst. (45)
Marvin Gurien, Newport Beach (71)
Raymond J. Harris, Power Plant (77)
Leon C. Green, Paint Shop (77)
Charles E. Hines, F-14 Aft. Sect. Assy. (77)
Lester C. Backer, Mfg. Est/Budg/Ind. Eng. (77)
Charles J. Dragowitz, Adv. Syst. Tech. M/S (86)
Leonard I. Dryer, Engineering (88)
John C. Sims, Production (88)

Sign up by Feb. 9 for billiards tourney

Headlining Recreation's winter tourneys this year is the annual pocket billiards competition.

Grummanites interested in participating should fill out the accompanying entry form and mail it to Recreation, A01-28A, no later than February 9, 1981.

The tourney will be held at the House of Lords billiard parlor on South Oyster Bay Road in Hicksville. Competition starts Thursday, February 19, at 5 p.m.

In the early rounds, the play will consist of a 75-point game with single elimination. When the competition is narrowed down to four players, 100-point games will be played with double elimination.

If you enter the pocket billiards tournament, you must check in with Mike Cherry on the first night of play.

Pocket billiards tourney

Entry form

Name ..... Ext .....

Perm. No ..... Mail Stop .....

Mail to: Recreation, A01-28A

Table tennis tourney

Name ..... Mail Station ..... Pl .....
Ext ..... Shift: Day ..... Night .....

Singles: ☐ A ☐ B ☐ C ☐ Women
(Men check one only. Women may enter women's event and one other.)

Doubles: ☐ A ☐ B ☐ C ☐ Mixed
(All players may enter one division plus the Mixed event.)

Doubles partners: A, B, or C Name ..... Ext .....
Mixed Name ..... Ext .....

☐ I wish to enter doubles but need a partner.

scorecard

Alaska or bust!

The Grumman Recreation Department is offering Grummanites an opportunity to visit Alaska, the 49th state. Tour includes Anchorage, Valdez, Whittier, and Fairbanks; glaciers, gold mining camps, the Alaska Pipeline and many other sights.

The trip is scheduled to leave on August 3 and return August 12.

The price is $1,450 per person based upon double occupancy and includes eight breakfasts and dinners.

To reserve a spot on this trip you must attend the sign-up meeting at Plant 28A on February 17 at 5:30 p.m. A $100 per person deposit is required. For additional information, contact Recreation, Ext. 2133.

High rollers

Recreation has a five-day, four-night trip scheduled to leave for Las Vegas on May 17, and there are still seats available. Grummanites and their families and friends will stay at the Hilton International hotel. The price is $479 per person based upon double occupancy.

Reservations can be made now at the Recreation building, Plant 28A. Call Ext. 2133 for more information.

Your move

The Grumman chess championship tournament begins on Friday, February 13, and runs for five consecutive Friday evenings. The tournament is open to all Grummanites. For more information, call Ken Marley, Ext. 4901.

Winter table tennis action begins Feb. 25

Table tennis enthusiasts are invited to participate in the annual Grumman Recreation tournaments. Individual tourneys will be held at Bethpage, Great River, and Calverton.

Take your pick

At Bethpage, there are eight divisions of play: four singles and four doubles events. You may enter one of the A, B, or C divisions for singles and one for doubles. There will also be a women's division. The mixed doubles competition may be entered in addition to singles and doubles events.

Players who won trophies in their last Grumman table tennis tournament must advance into the next higher division this year. Players who did not win in 1980 may enter the same division or drop into the next lower one.

Tougher competition

Grummanites can always play in the higher divisions if they prefer. Women may also enter the men's A, B, or C division if they wish.

Bethpage tourney play is at lunchtime in the Recreation building on South Oyster Bay Road; singles events start February 25. For more information on the Bethpage table tennis action, call Fred Danner, Ext. 5547, or Herb Mahoney, Ext. 2133.

How to enter

Bethpage contestants should fill out the accompanying entry form and mail it to Recreation, A01-28A. Those playing at other Long Island facilities should mail their entry forms to their respective tourney directors: *Plant 6*, Ernie Maggi, A17-06, Ext. 6772; *Plant 7*, Joe Mallins, A35-06, Ext. 6650; and *Great River*, Bob Albert, A16-43, Ext. 7956. Only A and B divisions will be played at these operational centers.

Entry forms should be returned no later than Friday, February 13.

calendar

American Society of Mechanical Engineers: Tues., Feb. 10, Berkener Hall, Brookhaven National Labs, Upton, N.Y., 8 p.m. Guests welcome. T. Cacioppo, (516) 273-6190. Wed., Feb. 18, Polytechnic Institute, Farmingdale, 8 p.m., guests welcome. H. Israel, (516) 799-8220

Coin Club: (Bethpage) Wed., Feb. 11, Pl. 25 vendor conference rooms, 12:05 p.m., informal lunchtime meeting. K. Hale, Ext. 3717

Computer Club: Mon., Feb. 2, GAA bldg., 5 p.m. General meeting. Guests welcome. I. Tish, Ext. 4783

Duplicate Bridge Club: every Thurs., 6 p.m., GAA bldg. Guests welcome. W. Lipman, Ext. 2506

French Club: Tues., Feb. 10 and Tues., Feb. 24, 123 Grohman's Lane, Plainview, 5:30 p.m. Guests welcome. L. Kaufman, Ext. 2323

GACE Flying Club: Mon., Feb. 9, GAA bldg., 5 p.m., regular meeting. Guests welcome. R. Reisch, Ext. 5967

Grumman Cycle Touring Club: Mon. Feb. 2, Knight Club, Hicksville, 5 p.m. Guests welcome. Discussion of plans for a one week tour in New England, Pennsylvania or Virginia. T. Beckman, Ext. 8994

Scuba Divers Club: Wed., Feb. 11, Chateau Restaurant, Wyandanch, 7:30 p.m. Guests welcome. A. Andreiev, Ext. 5537

Ski Club: Wed., Feb. 4, Crow's Nest Restaurant, Melville, 8:30 p.m. Guests welcome. A. Garmendia, Ext. 7819/8910

Society of Manufacturing Engineers: Mon., Feb. 9, Polytech Institute of N.Y., Farmingdale, 7:30 p.m. Guest speaker will be Hans Forsch, of Grumman Aerospace. Guests welcome. V. Pavlik, Ext. 8737

Toastmasters Club: Wed., Feb. 11 and Wed., Feb. 25, Pl. 25 room C, 5 p.m. Regular meeting. Grumman employees welcome. C. Peterson, Ext. 4930

GRUMMAN plane news

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